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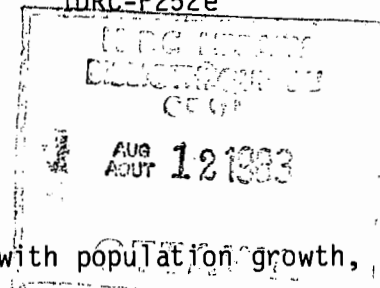
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MORE PEOPLE MEANS SMALLER INCOMES

by Gerry Toomey

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OTTAWA, IDRC -- When a country's economy cannot keep pace with population growth, the standard of living drops. For millions of people in developing countries, this means sinking deeper into poverty.

In a recent study by the Washington-based Worldwatch Institute, Lester R. Brown warns that in the absence of effective family planning programs, more and more countries will face this predicament during the 1980s.

By the 1970s, Brown notes, economic growth had already fallen behind population growth in 18 countries with populations totalling 121 million. The problem is foreseen as being especially critical in Sub-Saharan Africa, where the World Bank is projecting, for the first time, a decline in per capita income for a major region of the world.

In the Worldwatch study, Population Policies for a New Economic Era, which was funded by the United Nations Population Fund, Brown says the world economy appears to be losing momentum after a quarter century of unprecedented growth -- a period he calls the "oil era". "The recent stretch of slow growth, described by economists as the longest recession since the thirties, may in fact mark a basic shift in the world economy to slower long-term growth."

Brown estimates that if two percent annual economic growth becomes the new world trend, then nearly half the world's people face possible stagnation or

decline in incomes because they live in countries where population grows faster than two percent per year.

THE OIL ERA

In the post-Second World War boom, the world economy tripled in size because growth was literally fueled by the oil industry, Brown says. Agriculture, in particular, was transformed by petroleum: tractors replaced draught animals, five times as much petrochemically-derived fertilizer was used, irrigation equipment ran on petroleum fuels, and more chemical fungicides and pesticides were used to protect crops from disease and pests. Almost every major innovation that boosted food output was linked to oil.

Instead of putting extra tracts of land into production, farmers used more fertilizer to grow more food. In effect, energy replaced land as a means of increasing production. One result was that between 1950 and 1973, world grain output doubled, improving diets throughout the world.

"Cheap oil not only removed the cropland constraints on food production," says Brown, "but also acted as a safety valve as pressures mounted on the earth's biological systems." Other sectors began to rely on cheap oil, taking the pressure off biological resources. Petro-based synthetics began to replace natural materials such as cotton and rubber. Plastics substituted for wood, cardboard and leather; and kerosene became a cheap substitute fuel for wood in many developing countries.

World output of goods and services increased by more than four percent per year during the boom. The economic growth was more than double that of population growth, and living standards rose throughout the world.

But the large oil price increase in 1973 heralded the end of the oil era. Growth in oil production slowed, then stopped in 1979, and is now declining.

At the same time, biological support systems such as pastures, farmlands, forests, and the oceanic fisheries are deteriorating or have reached their productive capacity. Soil erosion has slowed the growth in grain output; the

fishing industry is barely growing because of overcatch; and growth in beef production halted in 1976 as grazing lands reached their capacity. Since 1973, world grain output has barely kept pace with world population growth.

In Africa, the problem is particularly severe. Although growth in the continent's food supply compares favorably with that for the world as a whole, per capita food production on the continent has declined some 11 percent since 1970 because of rapid population growth.

The world recession, according to Brown, marks the beginning of the end of the oil era. Despite occasional upswings in demand caused by lower prices, oil production will decline. With the exceptions of the Arctic and the South China Sea, the prospects of discovering new major sources are growing smaller. And the cost of pumping oil from older fields is climbing.

To illustrate the limited nature of the earth's petroleum resources, Brown points out that proven oil reserves would be exhausted in five years if the entire world consumed oil at the 1980 U.S. rate of 30 barrels per person per year.

But developing alternative energy sources "in the post-petroleum era" has its own snags, he cautions -- not the least of which is increased pressure on land, especially with alcohol fuel and hydroelectric schemes.

Whatever combination of energy sources individual countries eventually adopt, "land everywhere will have to be used much more intensively and carefully," he says. "The challenge for policymakers is to devise energy development strategies that permit the growth in renewable energy to support improvements in living standards, as expanding oil output once did, without making unsustainable demands on the earth's resources."

In the shorter term, the problem is population growth. "These new economic trends call for dramatic shifts in population policy to avoid declines in consumption levels," says Brown. "Political leaders in a few countries have already begun to grasp this. Unfortunately, all too many have not."

Incomes are falling, almost without exception, in those countries that have given little attention to the population side of the population/resources equation. Brown warns that countries with rapid population growth cannot rely on what is known as "demographic transition" -- the natural tendency of rising incomes to bring down not only death rates but birth rates, as occurred in the industrialized world. Income increases in some Third World countries have been large enough to help bring down death rates, but too meagre to cut the birth rate.

Fortunately, says Brown, well designed family planning programs work even when not accompanied by an increase in family income. But in future they will have to be accompanied by education programs that teach people not only how to reduce fertility but why. The connection between population growth and dwindling resources has to be brought home. Furthermore, each country will have to tailor a set of economic incentives and disincentives to its own population stabilization program.

A number of Third World countries are moving or have moved successfully in checking rapid population growth. Among them are China, Singapore, South Korea, Taiwan, Cuba, Barbados, Indonesia, Thailand, Colombia and Costa Rica. A common ingredient is their commitment to showing citizens the link between regulating population growth and the long-term social welfare of both individuals and the community.

The longer countries wait to reduce fertility, the more drastic the measures will have to be to prevent standards of living from sinking even further into poverty. China, for example, has set itself the difficult task of achieving one child per family. Perhaps an indication of the seriousness with which the country's leaders are taking that target is a new article in the constitution stipulating that all married couples "have the duty to practice family planning."